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Autumn
1949

SANDYLOAM

Garden Lilies

ALAN AND ESTHER MACNEIL
SPOONERVILLE ROAD
NORTH SPRINGFIELD, VERMONT

TERMS

Due to varied growing conditions over which we have no control it is not possible for us to place any guarantee on bulbs other than that they are true to name and will arrive in good condition.

Remittance should accompany order in form of draft, check or money order.

All prices include prepaid postage or express to destination in the U. S. or Canada east of the Rocky Mountains. Customers living in the far West are requested to add 5% to the total cost to help meet shipping charges.

Prices are based on the assumption that orders received will amount to \$3.00 or more. While we are happy to fill smaller orders, they are expensive to handle, and on these a 25¢ service charge should be added.

Six bulbs of any one variety and size furnished at the dozen rate.

* * * *

This catalogue is being sent to our regular customers and old gardening friends as heretofore. Others wishing a copy should enclose 25c with their request. This cost may be deducted when bulbs are ordered.

A FOREWORD FROM

Sandyloam

The exciting thing about a lily garden is the great variety of form, color and stature during the season. The straw-yellow *L. Svo-vitsianum*, the pumpkin-yellow *Duchess*, the clear yellows of *Golden Chalice*, the delicate scarlet *L. tenuifolium*, the myriad violets, ivories and pinks of the Backhouse hybrids as well as the white *Martagon album* and the clear pink *L. rubellum* all come in early summer. In mid-summer their places are taken by the vivid vermillion of *Brenda Watts* and *Fire King*, by the cherry-red of *Edna Kean*, the varied orange, red and yellow tones of *L. canadense*, *superbum*, and *Shuksan*. Just a little later great masses of the white trumpet lilies lend their fragrance to moonlight nights and in the woodland the delicate pink blooms of *L. japonicum* are coming to life. While all of these are still in their prime the great buds of *L. auratum* are starting to swell and one can count the weeks until the pink and white blooms of *L. speciosum* will open.

Not only does the lily scene change each week of the summer, it changes too from year to year. Things are happening so fast in the broad field of hybridising that it is difficult to keep abreast. The trumpet lilies have been crossed with the Turk's caps, the Turk's caps with the cup-shaped lilies and heretofore-undreamed of colors and shapes are coming to the fore.

On the whole the new lilies are good garden subjects, easy to manage and bred with that, as well as beauty of plant, in mind. It is difficult not to mention several that we have been watching for a few years now that are decidedly worthy of attention from every gardener. The Golden Chalice hybrids are early, moderately dwarf, and the array of yellow they bring to the border is dazzling. Until recently most of the yellow lilies have been either expensive or difficult but times have changed. Since yellow is a color peculiarly appropriate to lilies, it is fortunate that not only can the Golden Chalice hybrids be recommended but both *The Duchess*, and *Helen Carroll* are excellent. All three are quite distinct and all of them should be planted in every garden. Among the new deep reds *Dunkirk*, *Barbara* and *L. umbellatum Satan* are probably the finest. Likewise, it is good after a number of years to have *Lilium T. A. Havemeyer* back with us. It has been absent too long and is an old and well-loved friend.

Our new book, Garden Lilies, published by Oxford University Press, has received unanimously enthusiastic reviews throughout the country. We shall be happy to accept orders. It is priced at \$4.00.

GARDEN LILIES

AMABILE (Korea) This is a brilliantly colored dwarf variety, which bears from 4 to 6 grenadine-red black-spotted flowers of Turk's cap shape. Splendid for a splash of color in the rock garden or early border. Late June¹. Height 1½ to 2 feet. Plant 6 inches deep. Each 60c Dozen \$6.50

AMABILE LUTEUM The true yellow form is rare and one of the loveliest of all lilies. Plant 4 to 6 inches deep. Each \$1.50 Dozen \$16.50

AURATUM (Japan) This is an exotic beauty with immensely fragrant open-trumpet shaped flowers frequently as large as a dinner plate. They are white with a gold band down the center of each petal and the entire flower is flecked with crimson. Mid August to September is the blossoming time and they grow from 4 to 6 feet or taller. Plant 8 to 12 inches deep.
Collected wild bulbs. Each 85c, \$1.00 Dozen \$9.25, \$10.50

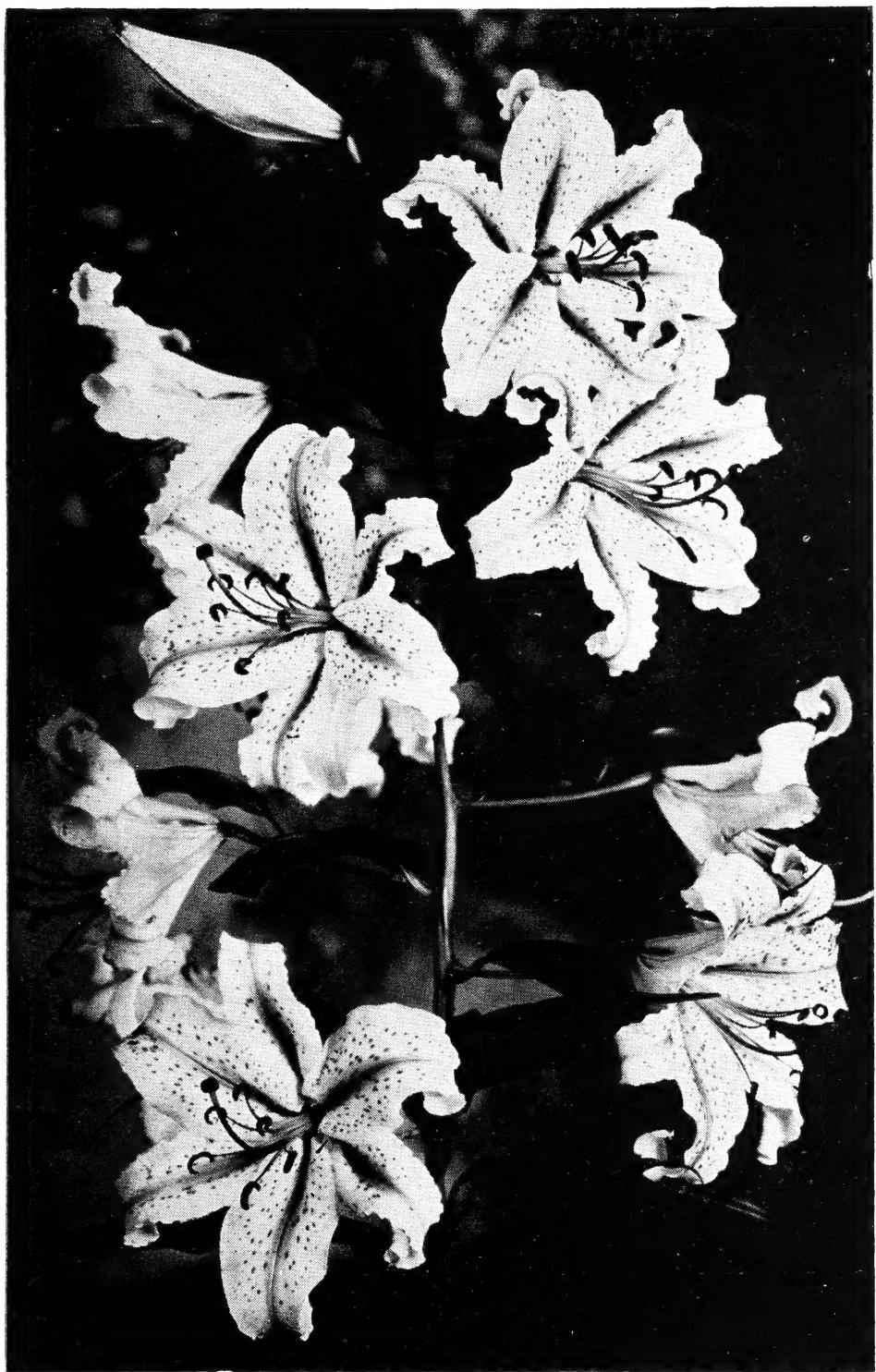
AURATUM, LATE FLOWERING FORM This form, which starts to open when *L. Auratum* is going by and continues well into October at Sandyloam, is a decided addition to the autumn garden. Though there is not the same degree of color variation as in *L. auratum*, the blooms are large, and the plants are normally much taller than in the type.
Each \$1.00, \$1.35 Dozen \$10.50, \$14.50

AURATUM PLATYPHYLLUM This showy form flowers a week to ten days earlier than the type. The plants are generally not quite so tall, much more stocky and with broader leaves. The blooms are larger, more massive, slightly pendant or tilted, and somewhat hooded — in contrast to the wide-open flowers characteristic of the type.
Each \$1.10 Dozen \$12.00

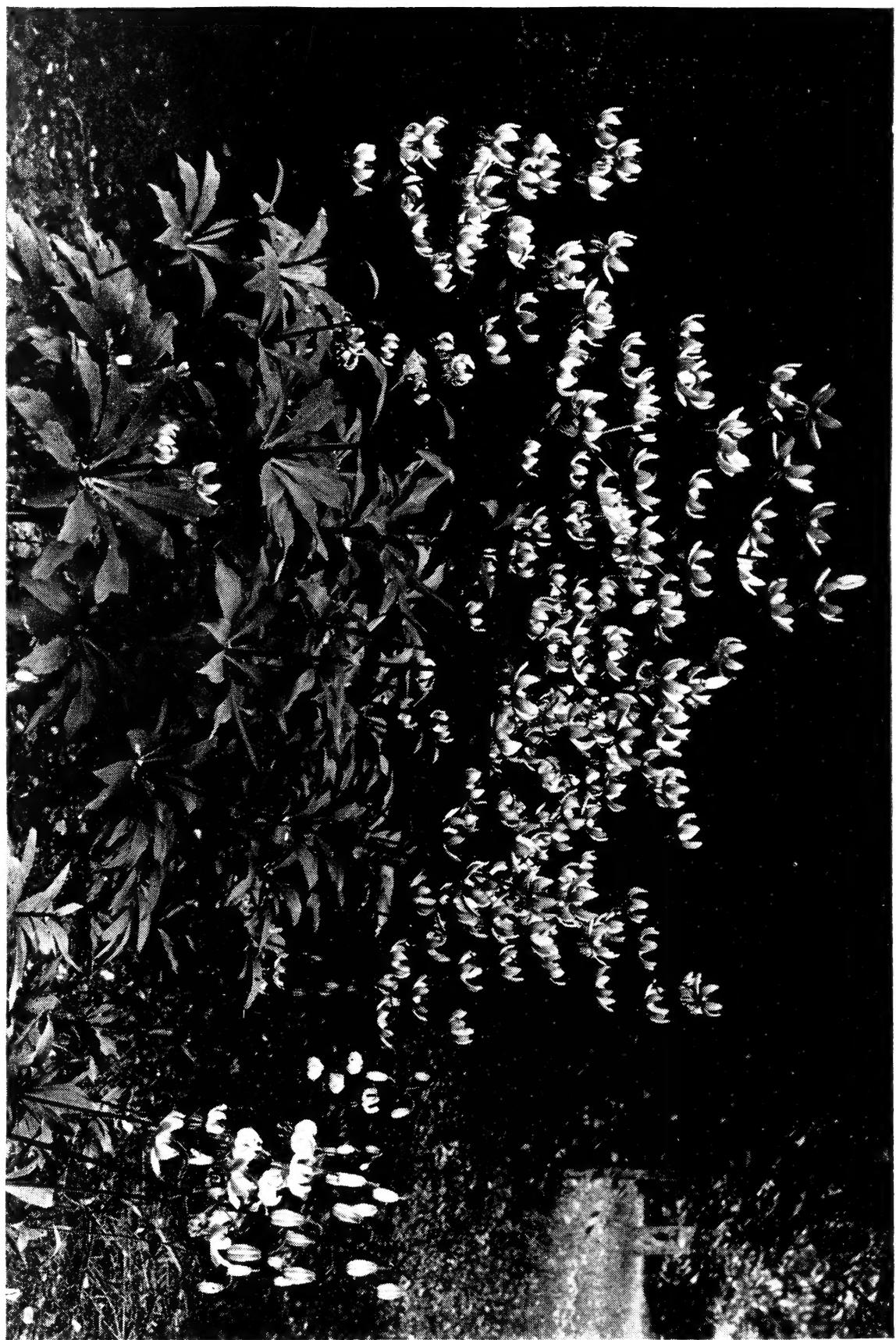
AURATUM PRAECOX The early flowering form starts to open when *L. regale* is at its peak. It is a handsome lily, more graceful than the type but with somewhat less massive blooms. Each \$1.25 Dozen \$13.50

AURELIAN HYBRIDS An important new group of seedlings developed by Carleton Yerex. The large blooms vary from vase-shaped to those with reflexed petals and in color from creamy white through the yellows to apricot. Mid to late July flowering. 4 to 6 feet. Each \$3.50 Dozen \$35.00

¹ Flowering dates given for all lilies are for central New England. The periods will naturally vary in other climates.



L. Auratum



L. Backhouse Hybrids

BACKHOUSE HYBRIDS A group raised by the late Mrs. R. O. Backhouse and a priceless addition to the garden. The individual blooms though not large are charming and are Martagon shaped, growing on a long spike. They are difficult to classify as to color for, actually, they are variable and iridescent, ranging from pale ivory through the golds, pink, mauve, apricot orange — all variously flushed and marked. An excellent group for the garden as they are not particular as to soil or location, establish well and are quite immune to mosaic. Height 5 to 6 feet. Plant about 6 inches. Late June to early July flowering.

BROCADE One of the finest of the named hybrids. The flowers are orange-yellow with pink marbling and maroon spots. A free-flowering lily and a vigorous grower.

Each \$3.00

MRS. R. O. BACKHOUSE This is one of the most attractive and probably the most vigorous of the entire group. There are a great many beautifully colored Martagon-shaped blooms to a stalk. The interior of the petals is ivory overlaid with a transparent flush of gold and delicately flecked with reddish-purple. The reverse of the petals is a deeper yellow shaded with greenish-orange though the reverse does not show when the blooms are expanded. Plant 6 to 8 inches.

Each \$3.50

BRENDA WATTS See Preston hybrids.

BARBARA A recent hybrid developed by W. C. Horsford and given the Award of Merit of the Massachusetts Horticultural Society in 1946. The large recurved blooms are a deep blood red and face outward from the stem. Late June. 2 feet. Plant 6 inches deep.

Each \$3.00

BROWNII (China) The true variety of Brownii is rarely beautiful and has been appropriately described as "the best tailored of all flowers." It bears from 2 to 4 large, trumpet-shaped and delicately fragrant blossoms a pure waxy white on the inside with chocolate brown stamens and pistil. The outside of each petal is marked by a band of purplish brown. This species is best grown where it will get shade part of the day. Its normal height is about 3 feet and it blossoms in late June. Plant 8 to 10 inches deep.

Each \$2.25 Dozen \$24.00

CANADENSE Our native meadow lily and a lovely thing it is, with graceful drooping bell-shaped flowers in golden yellow or orange-red. It grows from 3 to 7 feet and does best in a moist situation in partial shade. Late June. Plant from 6 to 8 inches deep.

Each 35c Dozen \$3.50 Hundred \$28.00

CANDIDUM (Europe) The beautiful Madonna Lily is well known. It is pure white with a short trumpet and a delicious fragrance. It blooms at the same time as Delphinium Belladonna and the combination of the two is traditional. Height 4 to 5 feet. Plant early, 3 inches deep in full sun.

American grown bulbs.

Each 40c, 70c, \$1.00
Dozen \$4.25, \$7.50, \$11.00
Hundred \$32.00, \$60.00, \$88.00

CANDIDUM "CASCADE STRAIN" A group of mosaic-free seedlings developed on our own Pacific Coast. The stems are tall and straight, the large flowers have a fine texture and perfect form. All plants of this group are greatly resistant to Botrytis and flower beautifully from bulbs somewhat smaller than the type.

Each 85c, \$1.00 Dozen \$9.00, \$11.00 Hundred \$72.00, \$88.00

CENTIFOLIUM HYBRIDS A group of glorious trumpet lilies of mixed parentage, with blood of the rare and striking L. centifolium dominant. The fragrant trumpets are immensely large, white, with a flash of yellow in the throat, and the reverse is stained from rose through bronze to green. Mid July flowering. Height 4 to 6 feet. Plant 8 to 10 inches.

Splendid, mosaic-free bulbs. Each 60c, 85c Dozen \$6.50, \$9.00

CONCOLOR (Korea) The small scarlet blooms are upright and delicately star-shaped. It is a distinctive lily with a great deal of sparkling charm and not nearly so well known as it should be. Mid June flowering. Height 18 inches. Plant 4 to 5 inches deep.

Each 35c Dozen \$3.50

CORONATION See Preston hybrids.

DALHANSONII The color of this Martagon-Hansonii hybrid is a glossy purple brown that takes on a deep mahogany red with sun shining through it. Plant 8 inches deep in full sun or partial shade.

Each \$4.50

DAURICUM VAR. WILSONII The cup-shaped blooms are an attractive shade of soft apricot occasionally flushed with rose or gold, and heavily spotted with brown. The delicate color makes them most useful in the late-July, early-August garden. 15 to 18 inches. Plant 5 inches deep. Each 75c Dozen \$7.50

DAVIDI var. WILLMOTTIAE (China) The blooms are reflexed and deep orange-red. As many as twenty grow in a pyramidal raceme on the graceful 5-foot stem. Mid July. Plant 8 to 10 inches deep. Will probably require staking.

Each 75c Dozen \$7.50

DUCHARTREI A rare Tibetan species with marble-white reflexed blooms delicately flecked with violet and marked with green in the throat. This is not an easy lily and seems to prefer a rather light acid soil with a high humus content, preferably on the dry side. It has a wandering underground stem and may come up as much as two feet from where the bulb is planted. 2 to 4 feet tall. Early July flowering. Plant 4 to 5 inches deep. The bulbs are characteristically small.

Each \$2.50

DUNKIRK A vigorous new hybrid by F. L. Skinner and an outstanding plant, which grows to 4 feet tall and bears a number of outward-facing deep blood-red flowers. The color is distinctive. The blooms are slightly flattened and the tips of the petals somewhat recurved. July flowering. Plant 4 to 5 inches. Awarded a First Class Certificate by the Massachusetts Horticultural Society in 1947. Each \$3.00

EDNA KEAN See Preston hybrids.

FIESTA HYBRIDS A highly publicized group of hybrids with reflexed blooms well spaced on thin wiry stems. The colors range from yellow through orange to clear dark red. The plants grow from 4 to 6 feet tall and prefer full sun. July flowering. Plant 5 to 6 inches deep. Each \$3.00 Dozen \$30.00

FIRE KING Those who have seen this lily consider it one of the most important garden plants to have been introduced in many years. It grows to about 4 feet and develops a magnificent spike that bears up to forty vermillion-scarlet blooms carried at right angles to the stem. The flowers "look at you" and this quality is a distinct break developed from crossing and re-crossing pendant or Turk's cap species with upright forms. L. Fire King is easy to grow, tends to multiply and is probably the most brilliantly colored lily in cultivation. A well-grown clump is a mass of sheer flame in the garden for from three to four weeks in early summer. Plant 5 to 7 inches. Each \$3.50

FORMOSANUM (Formosa) This is a splendid, very late trumpet lily. It somewhat resembles L. regale but blooms in late September or even October. The trumpets are longer and somewhat more constricted than L. regale. Height 4 to 6 feet. Each 50c Dozen \$5.50

FORMOSANUM, INTERMEDIATE FORM These are crosses of L. formosanum, Pricei with L. formosanum, and the resultant hybrid selfed or crossed back with Price's form. They bloom just after L. regale and average 30 inches in height. Plant 5 to 6 inches. Each 60c Dozen \$6.50

FREIMANN'S PINK CENTIFOLIUM This is a new race of trumpet lilies, and one of the most important to be offered in many years. The color is deep Ephyrite red on the exterior, with a flush of the same color in a somewhat paler shade over the ivory of the interior. Seen in massed plantings the color is almost identical with that of joe-pye weed. The seedlings are variable. In some blooms the color extends right down into the throat — in others the throat may be lemon yellow. These lilies are very vigorous. Late July and early August flowering. The plants commonly are taller than 6 feet. Each \$3.50

GOLDEN CHALICE HYBRIDS An exceptionally fine group of yellow, dwarf, early cup shaped lilies. The colors range from clear lemon-yellow through rich warm shades of gold and apricot and a mass of them in flower is a sheet of sparkling radiance. Early June flowering. 15 to 24 inches. Plant at least 6 inches deep. The small bulbs flower prolifically.

Each \$1.50 Dozen \$16.50

GUINEA GOLD A Martagon-Hansonii hybrid that inherits the splendid constitution of both parents. Pink buds make a fine contrast with the open flowers which are yellow, thickly spotted with brown. Holds its color best in light shade. June flowering. Height 5 feet. Plant 6 to 7 inches deep.

Each \$3.50 Dozen \$35.00

HANSONII (Korea) This is considered one of the best garden lilies because of its charm and ease of culture. Its Martagon-shaped blossoms are a rich cadmium yellow, spotted purplish-brown. It comes early — late June — and grows from 4 to 6 feet tall. It will hold its lovely color best if planted 8 to 10 inches deep in partial shade.

Each \$1.25 Dozen \$13.50

HELEN CARROLL A fine hybrid recently developed by F. L. Skinner. The cup-shaped blooms measure approximately 8 inches across and are a clear unspotted Chinese yellow. The shape and texture are exceptional and the color is one of the good yellows so rare in lilies. The plant is hardy and increases rapidly. We recommend it as probably the finest thing of its kind in the genus. July flowering. 8 to 12 inches tall. Plant 6 inches deep.

Each \$2.00 Dozen \$22.00

HENRYI (China) This is another vigorous and dependable lily. It comes into blossom just before the speciosums in mid to late August and carries as many as twenty flowers on 5 to 8 foot stems. The flowers though not as large as the speciosums are the same frilly recurved shape and are a soft orange-yellow with brown spots. The foliage is excellent but the plant is apt to require staking. Plant 9 to 10 inches deep.

Each 75c, \$1.00 Dozen \$8.00, \$11.00

HENRYI CITRINUM The pale yellow form of the above that has always been so scarce. The color is a clear lemon yellow and the plant is as vigorous as the type. We consider this one of the most attractive lilies in cultivation. Stock limited. Each \$3.00

HURRICANE See Preston hybrids.

IRIDOLLAE See Mrs. Henry's Rare Native Lilies.

JAPONICUM (Japan) This is the most beautiful of the pink trumpet lilies. The blooms are the size of *L. regale*, but much more delicate in texture and earlier by two to three weeks. The color is variable, generally a soft apple-blossom pink but sometimes deeper and sometimes very pale or even pure white.. The stem is slender and grows to 2 feet, bearing up to five blooms. It is not an easy, reliable lily. We have grown it very well, both in dry sandy soil and in moist woodland locations, but in both sites the soil was highly acid. Plant 4 to 5 inches deep.

Each \$1.20 Dozen \$13.00



L. Canadense



L. Candidum

LONGIFLORUM, "The Estate Lily" This is probably the finest strain of *L. longiflorum* ever introduced. It far outstrips all other varieties in size, substance of flower, stature and ease of culture. Under glass the Estate Lily sends up strong 5 foot stems which carry from three to eight immense white trumpets fully 50% larger than the best imported varieties of *L. longiflorum*. The flowers last longer than those of any other variety of this lily. For those with greenhouses there is nothing finer to grow for early spring flowering. For outdoor culture it is an excellent trumpet lily for early August and hardy in New England. Plant 8 inches deep.

Early November delivery. Each 85c Dozen \$9.25

MARGARET JOHNSON A hybrid of *L. dauricum* and *L. tigrinum* by F. L. Skinner and bearing the characteristics of both parent plants. The color is the same as *L. tigrinum*, a soft flame-red, spotted with deep purple and the semi-reflexed blooms face outward and upwards. It is a striking garden subject that grows well and increases rapidly. The stem is bulbil bearing like the Tiger Lily. Late July flowering. Height 4 feet. Plant 6 inches deep.

Each \$2.00 Dozen \$22.00

MARHAN A fine and vigorous hybrid between *L. Martagon album* and *L. Hansonii*. The lustrous orange of the petals overlaid with purple gives the effect of burnished copper. June. Height 4 to 5 feet. Plant 6 to 7 inches.

Stock limited. Each \$4.00

MARTAGON ALBUM (Europe) One of the loveliest lilies in cultivation, it has delicate small Turk's cap flowers, pure white and sweetly fragrant. It grows to about 4 feet tall and blooms toward the middle of June. Try it with peonies or with ferns. Plant 4 to 5 inches. Does well in heavy soil.

American grown bulbs. Each \$1.50 Dozen \$16.50

MARTAGON-HANSONII HYBRIDS These include the Backhouse hybrids, *L. Dalhansonii*, *L. Guinea Gold*, and the Marhans.

MAXWILL A vigorous relatively disease-proof variety that establishes easily and grows prolifically. The 5 to 6 foot stem is luxuriantly leaved. The greatly recurved flowers hang from a pyramidal raceme and are, in color, a brilliant orange-red with black spots and long brick-red stamens. Late July. Plant 8 inches deep.

Each 75c Dozen \$8.00

MICHIGANENSE This lily is native to the middle west and botanists have not decided whether it is a distinct species or whether it is a natural hybrid of *L. canadense* and *L. superbum*. The color range is as variable as that of *L. canadense*, but the petals are more reflexed. Like *L. canadense* and *L. superbum* it is an excellent lily for the woodland garden since it likes partial shade and a fairish amount of moisture. Height 2 to 5 feet. July. Plant 6 inches deep.

Each 50c Dozen \$5.50

MRS. HENRY'S RARE NATIVE LILIES It is our privilege to present to American gardeners the native lilies discovered by Mrs. J. Norman Henry. The list will grow longer from year to year as additional varieties are ready for distribution.

A collection of eight of Mrs. Henry's new color series of *L. philadelphicum* was shown at the 1946 Lily Show of the Massachusetts Horticultural Society. They were given a Silver Medal as well as the Society's Award of Merit.

CANADENSE GOLDEN RULE A most chaste and beautiful lily. The pure golden yellow flowers are completely spotless and have golden yellow pollen. No lily is more exquisitely lovely than this one. Young bulbs two years from scales.

Each \$20.00

IRIDOLLAE Mrs. Henry's already famous "Pot of Gold Lily."

A most remarkable and very beautiful new species of *Lilium*, discovered, collected, and grown by Mrs. Henry. The sweetly fragrant yellow flowers, often slightly stippled with pinkish red, are conspicuously spotted with dark brown in the throat. The pollen varies from bright mahogany red to yellowish brown. It is a Turk's cap Lily with well recurved segments. This lovely Lily reaches a height of over 6 feet in its native home in the south and carries as many as 8 or more blooms. In northerly climates with their shorter growing seasons, it may not grow so tall. At Gladwyne it blooms at about 3 to 4 feet in height. The slender stems carry oblanceolate leaves, typically in whorls and roughened on the margins and beneath the prominent veins. The upper leaves are small and so far apart as to give the upper portion of the stems a leafless appearance. The requirements of this exquisite Lily are a position in a sheltered spot and an acid sandy soil. Grown in this manner at Gladwyne it has survived five subzero winters out of doors with no mulch or protection of any kind. A full technical description of *Lilium iridollae* by Mrs. Henry appeared in *Bartonia* No. 24, published by the Phila. Bot. Club, Acad. Nat. Sci. Philadelphia, Pa.

Each \$60.00

PHILADELPHICUM BLACK DIAMOND A wonderful and weirdly beautiful lily. The blood red flowers are heavily blotched with black from base to tip of petals.

Three year old bulbs from scales. Each \$20.00

SUPERBUM, var. COPPERHEAD An odd and attractively colored lily that is difficult to describe. The petals and sepals are a pastel tawny orange with a bronze glow. The midribs on the outside are dark and the deep maroon spots on the inside are comparatively large and conspicuous. The flower is free from any red shading.

Each \$15.00

SUPERBUM, var. HOWARD HENRY The very handsome blood-red flowers, "Nopal Red" R. are of an exceptionally rich shade and highly glossy. The throat is soft orange ornamented with tiny dark dots. The texture of the petals is thick and waxlike. It is a lily of great beauty and distinction, and conspicuous from afar.

Each \$20.00

SUPERBUM, MRS. HENRY'S NEW VARIETY A splendid lily found in a Florida swamp six years ago. The coloring is much the same as *L. superbum*, but the longer, wide-spreading stamens give grace and distinction to the flowers. The leaves are much longer and narrower than the type and the stem is exceptionally rigid. It is a vigorous grower and reached a height of over 10 feet in its native home. It comes into bloom three or four weeks later than *L. superbum*. It was illustrated in 1942, "American Horticultural Society Lily Year Book" on page 91. It has withstood subzero winters without any protection. This new variety of *L. superbum* will be validly described in due time. Each \$25.00

SUPERBUM, var. NORMAN HENRY This is a rare yellow form that was only recently discovered. It is a characteristic *L. superbum* with blooms of a clear, unshaded and unspotted butter yellow. The flowers are of splendid texture with a surface like fine panne velvet. It is in best form when gardens are apt to be rather bare, late July and early August. And it is, without question, one of the most valuable garden plants in the world today and, more than that, one of the loveliest. *L. superbum* Norman Henry was given an Award of Merit by the Royal Horticultural Society on September 7, 1948. Each \$25.00

PAPILLIFERUM First time offered. This is one of the Yunnanese lilies sent to us in 1947 by the celebrated explorer Dr. Joseph F. Rock. On the advice of the taxonomists it is here listed as *L. papilliferum* though it seems quite likely that it may be a different and new species.

The plant, with us, is dwarf reaching only to 12 inches and bearing several small recurved blooms. The color is deep garnet on the interior of the petals with a central stripe of greenish white and the reverse is the same garnet but heavily overlaid with bronzy green. The leaves are slender and scattered and the stem has a marked tendency to wander underground. On our grounds the plants have been perfectly hardy through two difficult winters and we find that they have the real advantage of coming into growth very late in the season. The blooms are fragrant and the plant is August flowering. A few bulbs will be released this season. Each \$15.00

PARDALINUM GIGANTEUM The Sunset Lily An easily grown and brilliantly colored lily from California. The sharply recurved flowers are rich vermillion, stained deep blood red at the tips, golden orange in the throat, and heavily spotted with deep purple. Mid July. 3 to 5 feet tall. Plant 7 to 9 inches in full sun or light shade Each 50c Dozen \$5.50

PHILADELPHICUM (Eastern North America) One of our few upright flowering native lilies and one of the most brilliantly colored. The flowers are vivid orange scarlet with large dark maroon spots. A woodland lily which does best in acid soil, in partial shade where the drainage is especially good. Grows 1½ feet. Plant 5 inches deep. June to July flowering.

Each 25c Dozen \$2.75

PRESTON HYBRIDS A group of splendid hybrids by Miss Isabella Preston, the Canadian hybridizer, who has worked with lilies for years and to whom we are indebted for many fine garden plants.

CORONATION One of Miss Preston's most outstanding achievements. The plant grows to 3 feet tall, is upright and well leaved and bears up to twenty or more somewhat pendant recurved blooms of a clear primuline yellow lightly spotted brown. The exterior of the petals is also a clear pale yellow. Like all of Miss Preston's hybrids this is a tested garden subject, of simple culture and vigorous habit. The color is completely delightful. Plant 6 to 8 inches.

Each \$2.75 Dozen \$29.00

HURRICANE An open pollinated seedling of L. Edna Kean. The inflorescence is arranged like a candelabrum with upward-facing, vase-shaped flowers. The color is deep blood-red. Because of its distinctive and charming shape and ease of culture this is one of Miss Preston's most valuable contributions to the garden. Early July. Height 3 feet.

Each \$3.75

SPITFIRE A companion plant to the above and identical in every respect except the color which is flame scarlet with some medium sized bay spots.

Each \$3.75

STENOGRAPHER SERIES:

BRENDA WATTS This is one of the very best garden lilies. It grows magnificently, establishes readily, and has a strong constitution. It is one of those happy garden subjects that knows its job and proceeds to do it thoroughly. Added to this is the bold and brilliant beauty of the plant itself — tall and graceful, bearing a long spike of outward-facing blooms, soft orange-red in color. For dignity of stature and a mass of sheer color in the July garden it is hard to surpass. Height 5 feet. Plant 6 to 8 inches.

Each \$1.50 Dozen \$16.50

EDNA KEAN Resembles L. Brenda Watts except for its color which is a deep cherry-red, a color almost unique among lilies. It does not have quite the magnificent constitution of Brenda Watts, but will hold its own in nine gardens out of ten.

Each \$1.50 Dozen \$16.50

LILLIAN CUMMINGS Another fine grenadine-red hybrid. An extremely vigorous lily and an asset to any collection.

Each \$1.50 Dozen \$16.50

PRINCEPS PINK A splendid group of trumpet lilies in which both the interior and reverse of the petals is variously stained with shades of pink. They were developed by Carleton Yerex and unlike the pink forms of L. regale and L. centifolium by Mr. Freimann, these have been selected in terms of an apple-blossom tone, rather than the deeper dramatic coloring of the Freimann seedlings.

Each \$3.00



L. Centifolium Hybrids



L. Concolor

REGALE (China) This beautiful and well-known white, trumpet-shaped lily should be in every garden. It will thrive for years, increasing in size and beauty with each passing season. July. Height 4 to 7 feet. Plant 7 to 11 inches deep.

Each 45c, 75c, \$1.00
Dozen \$4.50, \$8.25, \$11.00
Hundred \$36.00, \$66.00, \$88.00

RUBELLUM (Japan) A dwarf apple-blossom pink trumpet lily and one of the earliest to flower. The individual blooms are small, trumpet-shaped, and the color is invariably a clear delicate pink. The plant grows to 10 or 12 inches and flowers in late May or early June. It seems to prefer a slightly heavy soil with a high humus content, but is generally quite adaptable. Plant 4 to 5 inches deep.

Each \$1.25 Dozen \$13.50

SATAN See L. UMBELLATUM SATAN

SCOTTIAE A valuable hybrid from Canada which was produced in 1929 and received the RHS Award of Merit in 1932. The blooms face outwards and are of a bright salmon-orange shade spotted purple. A most floriferous lily of easy culture. Height 2 to 3 feet. Plant 5 to 6 inches. June to July flowering.

Each 75c Dozen \$8.25

SENECA A new hybrid by the distinguished American authority, Mr. George L. Slate, is a distinct and pleasing lily obtained by crossing L. tigrinum with L. Leichtlinii var. Maximowiczii. The flowers face outward, have reflexed perianth segments and are of a softer and more pleasing color than L. tigrinum. Mature plants bear 25 or more flowers, considerably more than L. tigrinum and bloom during the last three weeks in August, or two to three weeks later than that species. The plants grow to 5 or 6 feet and have very woolly stems and buds. L. Seneca grows well in a lime free sandy loam as well as a heavy clay loam containing much lime. The bulbs are small and should be planted 5 to 6 inches deep.

Each \$2.00 Dozen \$20.00

SHUKSAN (Bellingham hybrid) One of the finest hybrids of American origin. On the tall wiry stems are tiers of gleaming jewel-like flowers of warm yellow, richly spotted reddish brown. In color and in pattern the surface might be compared to a leopard's skin. Vigorous and hardy and of easy culture. Mid July. Plant 6 to 8 inches deep.

Each \$1.00 Dozen \$11.00

SPECIOSUM (Japan) This is one of the most popular of all lilies. It comes late in the season, generally starts opening its frilly recurved flowers toward the end of August and carries well into September. Normally it grows to 4 feet. This season we offer the following varieties:

Speciosum Album A beautiful pure white form with a green-starred throat and coppery-brown anthers. September flowering.

Each \$1.50 Dozen \$16.50

Speciosum Magnificum This form is characterized by its brilliant and lovely color. The deep crimson of the spotting flushes the entire surface of the petals, leaving only a slender border of white.

Each \$1.50 Dozen \$16.50

Speciosum Punctatum An early form of *L. speciosum* that is distinguished from the type by its flowering period, by the graceful and vigorous character of the stem, the paler rose-pink color, and by the leaves which form two ranks on opposite sides of the stem. It is particularly valuable for northern gardens as it flowers from three to four weeks earlier than *Rubrum*. With us it is in bloom in late July and early August. In the more southerly gardens it will be in several weeks earlier.

Collected wild bulbs. Each \$1.50 Dozen \$16.50

Speciosum Rubrum This is the most widely grown and best known variety of *L. speciosum*. The flowers are white flushed and spotted with pink, ranging in shade from rose-pink to deepest carmine-pink. A hardy and strong growing plant.

Each 85c, \$1.00 Dozen \$9.25, \$10.50

SPITFIRE See Preston hybrids.

SUPERBUM The native American Turk's cap is a great favorite with gardeners and is one of the finest of all lilies. The pendant blooms are large and sharply recurved, orange-red in color, tipped with deeper red, and heavily spotted with brown. It adjusts well to almost any location, full sun as well as partial shade, and is recommended for the border, for inter-planting in shrubbery and especially for naturalizing. It can stand more moisture than most lilies. The height of the plant varies from 4 to 8 or 9 feet depending on where it is planted. July flowering.

Plant 8 to 10 inches deep. Each 35c Dozen \$3.50

SZOVITSIANUM (Caucasus) Related to *L. monadelphum* this lily is distinct from it in several respects from the gardener's point of view. The bell-shaped blooms are less reflexed, and a lighter color, being pale straw-yellow, freely spotted purplish-black. It is earlier to bloom, flowering for us in late May or early June, one of the first lilies in our garden. It grows from 3 to 5 feet, but seems to resent disturbance. It likes plenty of humus, but not too acid a soil, and is happy in half shade.

Small bulbs which have flowered, but may take a year to establish. Each \$2.00 Dozen \$22.00

T. A. HAVEMEYER This rare and beautiful hybrid has not been available for several years and we are fortunate to have a good stock of small flowering bulbs to offer this season. The plant was developed by Tom Barry of New Jersey and is a cross of *L. Henryi* and *L. sulphurem*. The flowers which measure 5 to 6 inches across are semi-trumpet, slightly reflexed, of a soft shade of buff externally lined with green; internally at the base of the petals a deep green fading to buff with the tips of the petals a warm cream. It is one of the most handsome lilies in existence. On may expect a normal stature of 4 to 5 feet but it is not uncommon for it to reach 10 to 12 feet and bear up to 20 blooms per stem. August flowering. Plant 8 inches deep.

Each \$3.00 Dozen \$33.00

T. A. HAVEMEYER SEEDLINGS The seedlings of T. A. Havemeyer are among the loveliest of August flowering plants. They range in color from ivory white through the pale golds to a deep warm yellow. The shape is somewhat variable. Some are of the open trumpet type while others are lovely nodding Turk's caps. Most are as good as Havemeyer and some are better. Whatever their shape or color each one is a gem. Limited number available as stocks are being reserved for propagation.

Each \$3.00

TENUIFOLIUM The charming Coral Lily is justly popular. It is an engaging little witch, one of the first to bloom, rarely more than 18 inches tall, with small Turk's cap flowers of brilliant scarlet. It is not a true perennial, tending to be triennial, and it is just as well to start a few new bulbs each year to keep your planting intact. Plant 4 to 5 inches.

Each 30c Dozen \$3.25

TESTACEUM The beautiful Nankeen Lily is one of the choicest and most effective plants for the garden. Similar in growth to *L. candidum* but it bears heads of fragrant broad, recurved flowers of nankeen yellow, delicately flushed with palest pink. Unlike *L. candidum* the flowers form an open cluster at the very top of the stem and are pendulous. It is not particular as to soil, a good loam is most satisfactory and a little lime is beneficial. Bulbs should be planted shallow (4 inches) and early. Best grown in full sun, it also does well in partial shade but is more liable to injury from botrytis in the latter situation. As the color is so delicate it requires careful placing. As companions, pale blue delphinium, or a background of shrubbery are suggested. There have never been enough bulbs of this old hybrid to meet the demand.

Each \$2.25 Dozen \$24.00

THE DUCHESS A hybrid by F. L. Skinner that we have been watching with increasing enthusiasm for four or five years. It is a distinct break in form and color and is a vigorous, readily established plant that grows with no special attention. It is wonderfully handsome and because of its habit and season fills a definite garden need. The blooms open flat and face outward with a downward tilt. The color is a brilliant orange-yellow with a sheen to the petals that gives them a special brilliance. The plant grows to three feet and flowers in early to mid-June. Plant 5 inches deep.

Each \$3.00 Dozen \$33.00

TIGRINUM The Tiger Lily is so well-known that it needs no description here. It is a magnificent August flowering lily and indispensable for the herbaceous border. We are pleased to offer the old New England type as it was brought here centuries ago by our sea captains. This is an especially vigorous form with dark rich green foliage and stems that seem to delight in their ability to grow and reach toward the sun. We consider it quite the finest form of *L. tigrinum* in commerce. Height 6 feet. Plant 5 to 8 inches.

Each 50c, 60c Dozen \$5.50, \$6.50

FLOWERING CHART FOR LILIES

MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER
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RUBELLUM ★ P
 MONADELPHUM - Y
 TENUIFOLIUM ★ R
 PYRENAICUM - Y
 TENUIFOLIUM GOLDEN GLEAM ★ O
 MARTAGON ALBUM ★ W
 UMBELLATUM W.N.CRAIG ★★ OY
 DAURICUM ★★ O
 SCOTTIAE ★★ O
 CONCOLOR ★★ R
 HANSONII ★★ Y
 DALHANSONII ★ B
 MRS. R.O. BACKHOUSE ★★ I
 CERNUM ★ L
 JAPONICUM - P
 WASHINGTONIANUM - L
 PARRYI - Y
 BROCADE ★ I
 SCEPTRE ★★ L
 CANADENSE ★★ O OY
 UMBELLATUM GRANDIFORUM ★ O
 ELEGANS LEONARD JOERG ★★ OY
 BROWNII ★ W
 FIRE KING ★★ R
 GUINEA GOLD ★★ B
 MARHAN ELLEN WILLMOTT ★ B
 AMABILE ★★ O
 AMABILE LUTEUM ★★ Y
 CANDIDUM ★ W
 SCOTTIAE HYBRIDS ★★ O-Y AND R
 BRENDAWATTS ★★ R
 EDNA KEAN ★ R
 TSINGTAUENSE ★ O
 UMBELLATUM MAHOGANY ★★ B
 TENUIFOLIUM RED STAR ★ R
 ELEGANS ASTROSANGUINEUM ★★ R
 WILLMOTTIAE ★ O
 TESTACEUM - A
 DAVIDII ★★ O
 REGALE ★★ W
 ELEGANS DOUBLE SCARLET ★★ R
 DUCHARTREI - W
 GRAYI ★ R
 GREEN MT HYBRIDS ★★ W
 PRINCEPS ★★ W
 CROW'S HYBRID ★★ W
 PARDALINUM GIGANTEUM ★★ R
 SUPERBUM ★ O
 UMBELLATUM MOONLIGHT ★★ Y
 CENTIFOLIUM ★ W
 MICHIGANENSE ★ O
 PHILADELPHICUM - R
 SPITFIRE ★ O
 CORONATION ★ Y
 SHUKSAN ★ Y
 AURELIANENSE SEEDLINGS ★★ I
 MAXWILL ★★ O
 DAURICUM WILSONII ★★ A
 AURATUM ★ W
 CALLOSUM ★★ O
 SARGENTIAE - W
 TIGRINUM ★★ O
 DAURICUM PARDINUM ★★ A
 SPECIOSUM PUNCTATUM ★★ P
 FORMOSANUM EARLY ★ W
 HENRYI ★★ OY
 T.A.HAVEMEYER ★★ I
 SULPHUREUM - W
 SPECIOSUM RUBRUM ★★ P
 LONGIFLORUM, ESTATE LILY - W
 WARDII - P
 FORMOSANUM INTERMEDIATE ★ W
 SENECA ★ O
 BROWNII KIUKIANG ★ W
 SPECIOSUM ALBUM ★ W
 FORMOSANUM LATE ★ W

COLORS OF LILIES ARE SHOWN BY SYMBOLS GIVEN BELOW
 THESE LETTERS ARE PLACED AT RIGHT OF NAME

A - APRICOT	OY - ORANGE-YELLOW
B - BROWN	P - PINK
I - IVORY TO PALE YELLOW	R - RED
L - LILAC	W - WHITE
O - ORANGE-RED	Y - YELLOW

BEST GROWERS ARE DOUBLED STARRED ★★
 GOOD GROWERS IN MOST GARDENS - THOUGH THEY MAY
 NEED REPLACEMENT FROM TIME TO TIME - ARE SINGLED
 STARRED ★

THIS CLASSIFICATION INTO BEST GROWERS AND GOOD
 GROWERS IS MEANT TO BE SUGGESTIVE ONLY. ONE OR
 TWO OF THE NEW LILIES ARE NOT WELL ENOUGH
 KNOWN TO BE ACCURATELY CLASSIFIED. ALSO, GARDEN
 AND CLIMATIC CONDITIONS VARY SO THAT LILIES
 HAPPY IN ONE GARDEN MAY FAIL TO ESTABLISH IN
 THE NEXT; AND LILIES DIFFICULT IN ONE GARDEN
 MAY GROW LIKE WEEDS IN ANOTHER.
 THE FLOWERING PERIODS GIVEN ARE FOR CENTRAL
 VERMONT. THEY WILL HAVE TO BE ADJUSTED FOR
 GARDENS IN OTHER PARTS OF THE COUNTRY.

MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER
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TSINGTAUENSE Somewhat resembles *L. concolor*, but is much more striking and vigorous. The broad rich green foliage grows in whorls around the stem as does the foliage of *L. Hansonii*. The individual blooms are a glossy nasturtium-red, upright, star-shaped with long fluted petals. This is one of the good new garden lilies, distinctive and adaptable. July. 3 feet. Plant 6 to 7 inches. Each \$2.25 Dozen \$25.00

UMBELLATUM (European garden hybrids) The so-called Flame, Candlestick or Torch Lily of our gardens. All bear umbels of upright, cup-shaped flowers in brilliant colors and nothing can compare with them when planted in groups in the border. They are of easiest culture, require no care and establish well, quickly forming good sized clumps. We list a group of distinct color and habit. Late June. Plant 5 to 6 inches deep.

Grandiflorum The common form, a brilliant orange-red spotted with deeper red. Height 2½ feet. Each 50c Dozen \$5.00

Mahogany A showy form with a good head of mahogany-red blooms. 18 inches tall. Each \$1.00 Dozen \$10.50

Satan. A new clone developed by the outstanding American specialist, Mr. George L. Slate, and offered last season for the first time. The plant grows to 2½ feet, and bears up to four or five well-spaced blooms, a deep currant-red in color. One of our men, on seeing it for the first time said, "You couldn't find anything redder than that, nor greener than that, no matter how hard you looked." The individual blooms measure six inches across, with petals in their natural position — not forced to gain extra spread. We expect this lily to replace all other deep red forms of *L. umbellatum* as soon as stocks are more generous. It is a good grower and increases rapidly in the garden. Each \$3.50

Violet Niles Walker Mr. Louis Vasseur considers this his finest seedling. It is a clear unspotted lily of vivid persimmon orange, with slightly deeper shadings towards the center of the petals. The plant grows to 18 inches and bears from five to six wide-open blooms that measure six inches across. It holds its glowing color well in full sun or light shade and flowers at about the same time as *W. N. Craig*. Each \$7.50

W. N. Craig This fine hybrid by Mr. Louis Vasseur is a striking and graceful plant carrying up to six blooms of a clear unspotted orange-yellow. The petals are slender and so well spaced that most forms of *L. umbellatum* seem coarse by comparison. It is a vigorous plant that grows 2 to 2½ feet and is among the first of the *umbellatum* to flower. It is named in honor of the late Wm. N. Craig and was awarded the First Class Certificate of the Massachusetts Horticultural Society in 1943. Each \$2.50 Dozen \$26.00

For other cup-shaped lilies that belong to this same general group see also: *L. dauricum* Wilsonii, Golden Chalice Hybrids, Helen Carroll.

WILLMOTTIAE See *L. Davidi* var. *Willmottiae*.

LILIES FROM SEED

As we have had many requests for seed we have arranged to offer a limited number of varieties. Seeds should be planted about $\frac{1}{2}$ inch deep and may be sown in the open, but can be controlled more readily if planted either in a cold frame, or in flats in the house. The species starred (*) should germinate in from a month to six weeks — the others are slow and though they germinate underground will not show their first growth above ground until the second summer. A light mulch of sphagnum or peat moss is helpful in maintaining an even soil moisture.

Seeds of the following are priced at 25c per packet and the number of seeds in each packet varies according to the rarity of the species. While hybrid lilies do not come true from seed, it should be noted that the possibilities in such a packet are most fascinating for the gardener.

*amabile	*longiflorum
*amabile luteum	*Maxwill
auratum	michiganense
auratum platyphyllum	Parryi
Backhouse hybrids	*regale
Brownii colchesteri	*regale hybrids
canadense	*Sargentiae
*centifolium	Shuksan
columbianum	speciosum rubrum
*concolor	superbum
*Crow's hybrids	Szovitsianum
*dauricum var. Wilsoni	*tenuifolium
*Davidi	*tenuifolium Golden Gleam
*Davidi var. Willmottiae	tsingtauense
*formosanum	*umbellatum grandiflorum
*formosanum, Pricei	Washingtonianum
*Green Mt. hybrids	
*Henryi	

In addition to the above we offer seed of:

***L. centifolium hybrids** from one of our fine West Coast hybridizers.
This is hand pollinated and is carefully selected to give a wide range of color and form. **Small packet 50c**

CULTURAL NOTES

When lilies are healthy and find a place in the garden that they like, they thrive.

Most lilies like partial shade at some point during the day. A very few of them actually prefer full sun and an even smaller number like heavy shade. These are noted in the text. Almost all like a ground cover of some sort that will shade the ground in which they are growing but will leave the stems free to rise up into the sun.

Good locations are various. The perennial border offers excellent growing conditions for most species. Lilies are happy when interplanted with peonies, iris and other plants. Almost all of them are effective and do exceptionally well when planted in isolated groups against the shrubbery. The taller ones are happy and effective within light shrubbery. A rather large group lend themselves to naturalization and the woodland garden. All are happy with ferns.

A good friable loam with plenty of humus is the best soil. Do not be afraid to feed. Bonemeal, well rotted manure or compost can be worked into the beds. A mulch of manure and commercial fertilizer is excellent if applied in fall so that the food will work down into the ground during the winter. Manure can also be applied as a summer mulch if desired and is best if used either at or after the time of flowering. Manure should not be used on those varieties of lilies labeled capricious or those highly subject to basal rot.

The majority of species are best if fall planted, so we strongly urge purchasing at that time. Bulbs are lifted and shipped as soon as they are ready. Some mature early in August, others not till mid-November. If the bulbs are going to arrive late in the season and there is danger that the ground might be frozen at the time, it is recommended that it be mulched with leaves, straw or boughs to keep it open. After the bulbs are planted the mulch should be replaced so the ground temperature will reach freezing gradually.

Planting depth for lilies should be three times the vertical diameter of the bulb. This distance is measured from the bottom of the bulb. There are five exceptions to the general rule: the two European lilies, *L. candidum* and *L. testaceum*, which have no stem roots, are planted a few inches below the surface; and the three Indian lilies, *L. cathayanum*, *L. giganteum* and *L. cordatum* are planted with the tip of the bulb at the surface. In the rare situations where the ground water level is very close to the surface more shallow planting is indicated. However, it is also true that lilies have a tendency to find their own depth and that the depth varies from location to location; consequently, the depth at which the bulbs are placed is somewhat flexible. We have seen an entire bed of *L. pardalinum* work itself up from ten to twelve inches to three or four inches from the surface, because the bed where they were growing was periodically flooded and the shallower planting met their requirements. Likewise, in another bed of *L. auratum*, where the bulbs were set only six or seven inches below the surface, we found on digging that they had pulled themselves down to from eighteen to twenty-four inches.

Good drainage is essential. Do not attempt to plant lilies where they must stand in water for any length of time as this will be conducive to rot.

There are certain problems connected with the growing of all garden plants and lilies naturally have their share. The following discussion deals with these and with the means by which they can be controlled.



Lilium T. A. Havemeyer

L. Japonicum



SPRING FROSTS

Occasionally late spring frosts raise havoc, especially when they follow an early warm good growing period. Those lilies that tend to start into growth very early as do *L. regale*, *L. Hansonii*, and the Martagon-Hansonii hybrids are naturally most liable to injury. On this account we recommend a good winter mulch over these lilies in areas liable to late frosts. The mulch tends to keep the bulbs dormant in spring so that when they emerge and the buds show, danger of frost injury is pretty well past. If manure, peat moss, leaves, straw or pine needles are used this material may be left on through the summer, thus working into the soil and adding humus content. If boughs or similar material is used it should be left on as late as possible. Lilies planted through perennials or light shrubbery are fairly well protected by the foliage of these surrounding plants.

BOTRYTIS

Botrytis is troublesome in some localities. This is the fungus that forms brown spots on the leaves during damp weather, particularly in spring and early summer. Attempts to control it are primarily for the sake of appearance. Unless the condition is serious the bulbs are not affected though they may not achieve their full growth for the following year. In districts where it is prevalent, those districts having extended damp weather in spring, preventive measures are recommended. A spray or dust of Bordeaux¹ applied early will help to ward off an attack. This should be repeated whenever the weather is damp. Lilies especially susceptible to Botrytis should be planted, if possible, where the foliage has an opportunity to dry off. Morning sun and a gentle breeze are helpful. This group includes *L. candidum*, *L. testaceum*, *L. chalcedonicum*, *L. canadense*, and *L. Hansonii*. *L. candidum* is probably the worst offender. With this lily the spores of the fungus are carried through the winter on the basal leaves that form in autumn. By spring these leaves have served their function and can be removed and burned if there is a tendency to Botrytis in the garden.

MOSAIC

Mosaic has been the most widely discussed of the troubles affecting lilies. We treat it at some length here because so much of the popularly published information on the subject has been both impractical and misleading.

Mosaic is a virus that affects a few lilies seriously, some slightly and many not at all. There is no known cure. Perhaps some day the research pathologists will find one. Frankly, we do not feel it is nearly so serious as it has been generally painted, since it is quite easy to detect, comparatively easy to "live with" and can be well controlled by proper selection and spacing of varieties in the garden. The gardener who has a bit of space so that his lilies are interplanted with other perennials and mayhap some shrubbery will have little or nothing to worry about.

¹ See Penetrol on page 23.

For the gardener's convenience we are classifying the more important varieties according to their susceptibility to mosaic:

Group I

The first group consists of a number of fine standard garden lilies which always have mosaic. One or two have had it for hundreds of years. In spite of this they are all splendid plants that delight their owners year after year.

<i>L. candidum</i>	<i>L. chalcedonicum</i> (with rare exceptions)
<i>L. elegans</i>	<i>L. princeps</i> , George C. Creelman
<i>L. testaceum</i>	<i>L. T. A. Havemeyer</i>
<i>L. umbellatum</i> (old forms)	<i>L. tigrinum</i> (with rare exceptions)

Group II

The second group, at the other extreme as to susceptibility, consists of those lilies that resist infection to the point where they can be safely considered immune.

<i>L. Brownii</i> (type)	<i>L. Martagon</i> (all forms)
<i>L. giganteum</i>	<i>L. pardalinum</i> (all forms)
<i>L. Hansonii</i>	The <i>Martagon-Hansonii</i> hybrids

Group III

The third group is liable to infection but does not acquire it readily and tends to survive for a number of years in the garden, though the plants will gradually deteriorate somewhat and may finally die out.¹

<i>L. regale</i>	<i>L. Maxwill</i> ¹
<i>L. tenuifolium</i>	<i>L. sulphureum</i> ¹
<i>L. Willmottiae</i> ¹	<i>L. monadelphum</i> ¹
<i>L. Henryi</i> ¹	<i>L. Szovitsianum</i> ¹
<i>L. cernuum</i>	All of the Preston, Stooke's and Bellingham hybrids ¹

Group IV

The fourth group consists of those lilies that are most highly susceptible to infection and rarely survive more than a single season when infected.¹

<i>L. auratum</i>	<i>L. japonicum</i>
<i>L. canadense</i> ¹	<i>L. superbum</i> ¹
<i>L. formosanum</i>	

These classifications while an invaluable guide to the gardener are somewhat artificial. Actually the two hundred odd varieties and species of lilies run the whole gamut from susceptibility to immunity and within each classification there is considerable range in regard to immunity. This is particularly true of Group IV in which *L. auratum*, *L. formosanum*, and *L. japonicum* are the most highly susceptible that we know, while *L. canadense* and *L. superbum* can stand a fairish amount of exposure. Now and then we find individual clones that show a real degree of desistance.

Mosaic is spread from one plant to another ONLY by means of a small group of sucking and chewing insects. It does not travel through the air or soil. *Aphis* are the principal culprits. The farther north one

¹ Those designated are less susceptible than the others within the given group. Also, individual plants within Groups III and IV may prove relatively resistant.

goes the fewer aphids one finds. At Sandyloam we have none. We believe that our only mosaic carrier is the potato leaf hopper. The insect carriers are almost invariably wind blown or crawling and consequently do not tend to travel very far, not more than 30 to 50 feet in the garden.

With this knowledge as a basis the gardener can order and plant his lilies with more understanding and with relative safety and confidence. Lilies from Groups I and II are completely reliable. They will never perish from mosaic, and they can be planted any place without fear as to their susceptibility.

The lilies in Group III can be ordered with a good deal of confidence. They are all of them first rate garden lilies and even if infected with mosaic will be excellent garden plants for many, many years. However, if a particular gardener wishes any one of this group of lilies in very special form, with a maximum of height and floriferousness he should buy clean bulbs, which we offer, and plant them at some distance from the lilies in Group I.

Group IV is a quite different story. This small group has in it the lilies we must guard. If they were not so exquisite they would not warrant the special attention they require. But *L. auratum* and *L. japonicum* are so beautiful that most gardeners feel that the extra effort necessary to grow them well is justified. If these lilies are to last in the garden more than a year or two they must be kept at a safe distance from all lilies except those in Group II. A distance of 30 to 50 feet from infected plants is recommended. (This is as far as the carriers are apt to travel in the garden.) The group does especially well when planted alone against shrubbery.

It is our opinion that the average gardener will find it very much simpler to plan his plantings in terms of getting along with mosaic than it will be for him to try to eliminate it altogether. Our own losses from mosaic are always negligible because we follow the cultural program we recommend for the gardener. But we do have some losses now and then and the gardener in turn should expect to have to make some replacements from time to time. We use every precaution to see that the bulbs that we send out are clean. We isolate by planting in the woodland and we spray regularly with nicotine sulphate to control the carriers. When you order lilies from us from Groups II, III, and IV you may expect clean bulbs, though we have not felt justified in issuing a blanket guarantee that they are mosaic-free. That would require laboratory testing of every individual bulb before shipment. Most of the lilies in Group I that have had mosaic throughout their history, the Madonnas probably from Biblical times, are infected in our plantings. But while every dooryard Tiger and *umbellatum* has mosaic and thrives indefinitely, we are slowly building up some clean stocks of these particular lilies for the handful of mosaic-free gardens which exist in this country.

BASAL ROT

Though basal rot has been recognized for many, many years it is still little understood even by the specialist. Fortunately it attacks only a limited number of lilies, and we are now learning that prevention and control are possible through disinfection and careful attention to good cultural practices. It is a kind of rot that starts either on the roots of the lily or at the basal plate and works up through the bulbs causing the scales to drop off and fall away. It is possible that it may

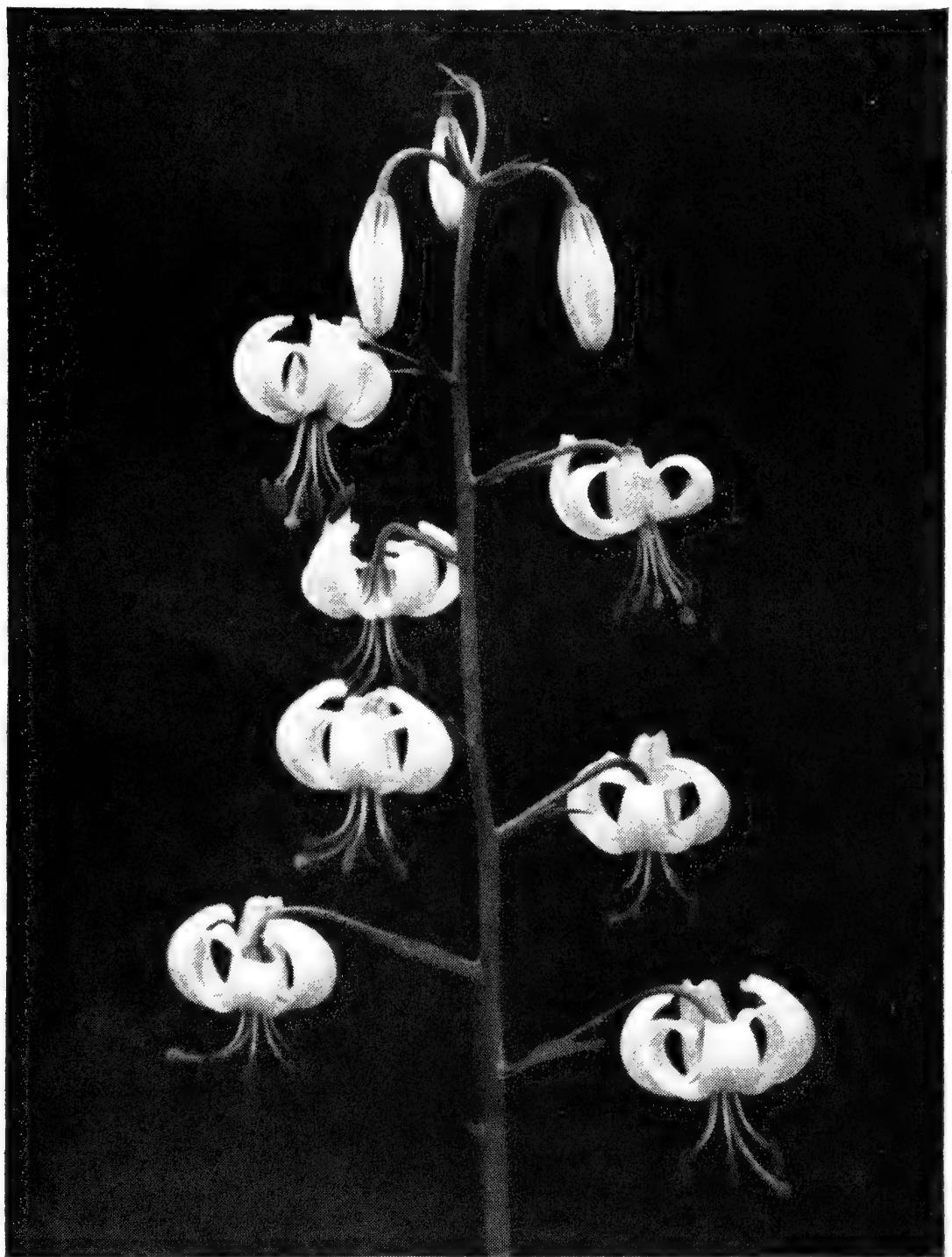
be present in the soil in which the bulbs are planted. It is possible that it may be present on bulbs when they arrive from the nursery and it is also possible that some slight bruise or injury that occurs during packing or mailing or handling in the garden may be responsible. As a precaution against basal rot's developing we disinfect all bulbs before shipment, but this does not preclude their acquiring the disease, though it is a very real safeguard.

We feel that the current habit of shipping bulbs with the roots intact is not helpful and may sometimes be harmful, as these roots rarely survive and take hold again in their new home but only tend to rot once they are in the soil. In some varieties that are not susceptible to basal rot the presence or absence of roots is relatively unimportant. However, in our experience those lilies liable to basal rot are much less apt to acquire infection if the roots are clipped before the bulb is replanted. If they are removed, Hormodin or any of the standard rooting powders will help the bulb to quickly form new and healthy roots. Dusting with Spergon is an added precaution.

In the matter of basal rot there is a subtle factor worthy of mention. The purple form of *L. Martagon* which is native to Europe thrives in European gardens and is apparently not subject to basal rot. In this country the purple *Martagon* is a different story. There is no lily more susceptible to basal rot, even when it has been grown from seed here. The white *Martagon*, which is native to the same areas in Europe, thrives in both European and American gardens. These illustrations could be repeated many times with other well known varieties. All we can say is that in a certain environment a given lily tends to thrive — or the reverse. No one has as yet been able to put his finger on just what occurs. This will, of course, be an area for some future research.

In addition to *L. Martagon* type, the following lilies are especially susceptible to basal rot in American gardens: *L. chalcedonicum*, *L. testaceum*, *L. croceum*, *L. pardalinum*, *L. Humboldtii*, some of the Bellingham hybrids, *L. pyrenaicum*, *L. formosanum*, and *L. speciosum*.

It may be of interest to note that basal rot is probably the principal factor responsible for the serious losses that frequently occur in seedling lilies.



L. Martagon Album



L. Superbum Norman Henry

GARDEN MATERIALS HELPFUL IN GROWING LILIES

HORMODIN POWDER NO. 1

At Sandyloam we find Hormodin No. 1 most helpful in establishing all lilies and we especially recommend that bulbs of any rare, expensive or slightly difficult lily be dusted before they are planted. The old roots should be clipped before dusting and new roots will establish quickly.

$\frac{1}{4}$ oz. package, each 25c.
 $1\frac{3}{4}$ oz. package, each 50c.

SPERGON

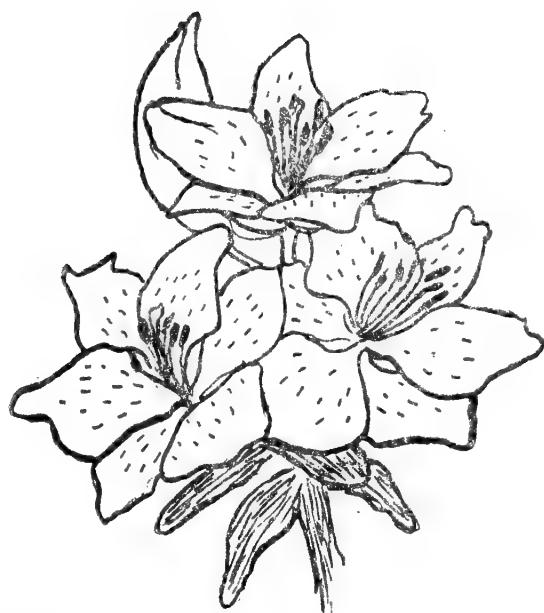
A number of disinfectants are in use for the prevention of both basal rot and damping off. We find Spergon a shade better than most and also the handiest to use. It is a fine yellow powder with which bulbs susceptible to basal rot should be dusted before planting.

2 oz. bottle, 45c.

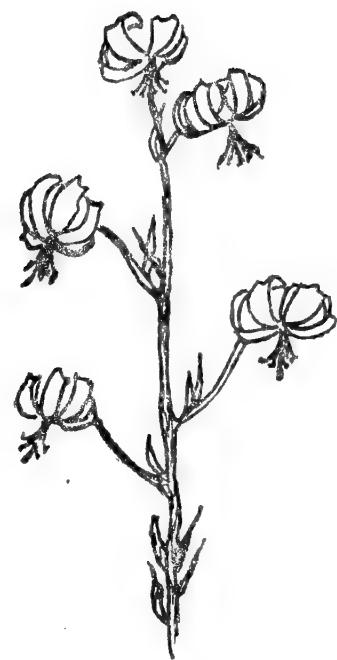
PENETROL

A new compound that acts as both spreader and sticker when mixed with Bordeaux. It causes the spray to adhere for weeks even through wet weather. It can also be used with nicotine solutions for the control of aphids. Used at the rate of one pint to fifty gallons of water, or one teaspoon to two quarts of water. Full directions on bottle.

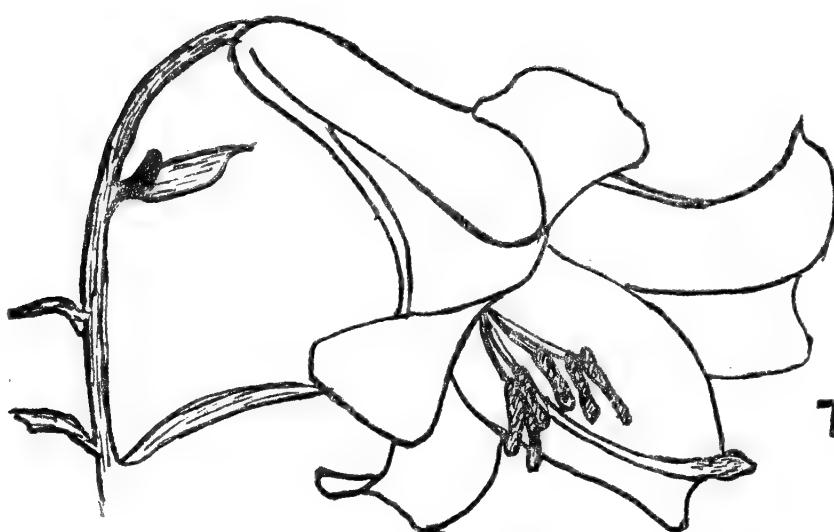
1 qt. bottle, 75c.
1 gal. bottle, \$1.75.



UPRIGHT LILY



MARTAGON LILY



TRUMPET LILY

TYPES OF LILY BLOOMS

1949

ORDER SHEET

Sandyloam

Spoonerville Road, North Springfield, Vermont

Ship by Date ordered 19.....

State if wanted by parcel post or express.

In terms of our own transportation facilities we prefer shipping all small packages by parcel post.

To (Name) _____

Mr., Mrs., Miss or Firm Name.

P. O. Box, Street

or Rural Delivery _____

Post Office _____

State _____

Station or Exp. Office _____
Only if different from P. O.

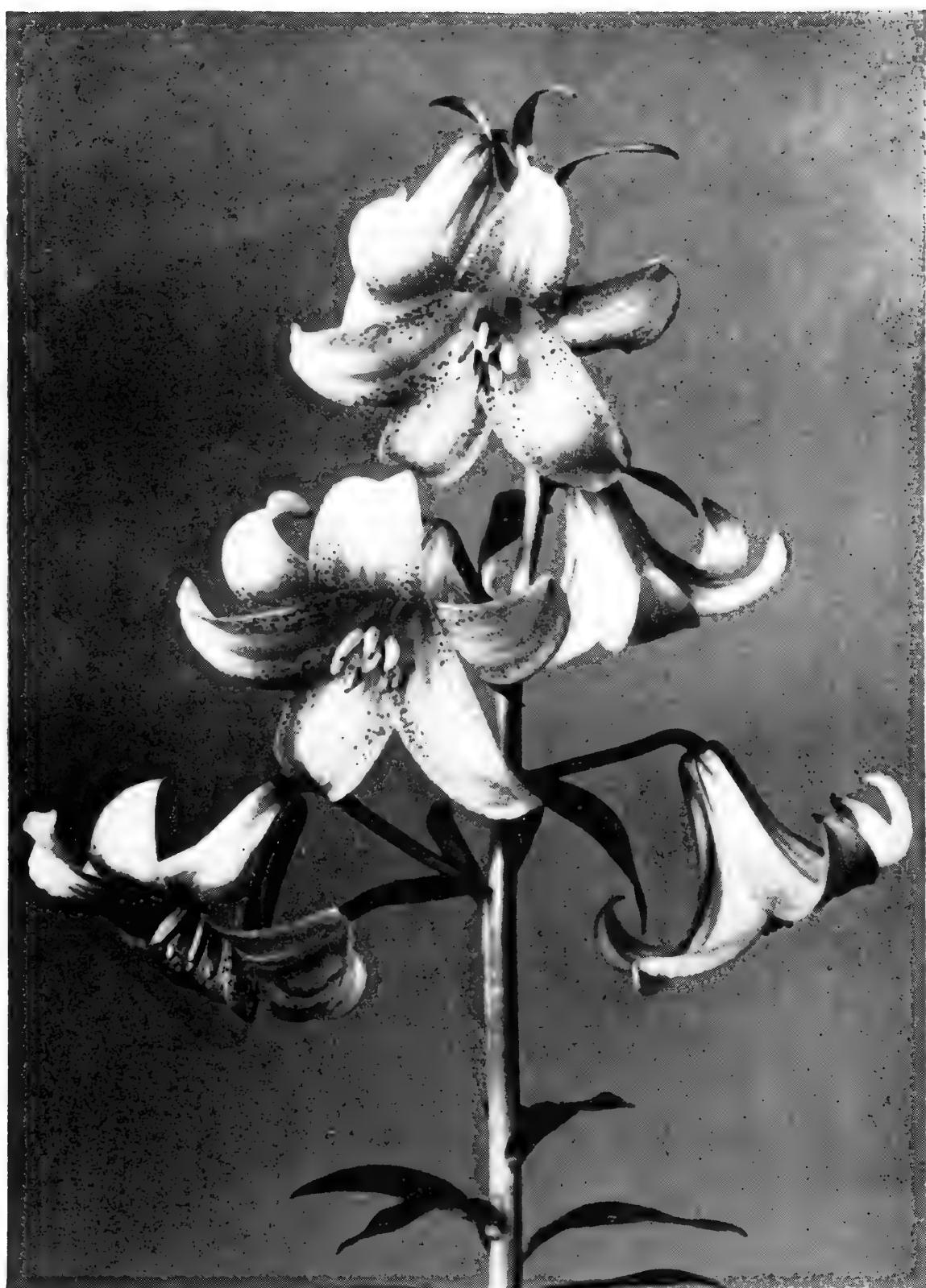
Any claims for shortages or errors must be made within five days after receipt of goods as we will not be responsible after that time. We give no warranty, expressed or implied, as to description, quality, productiveness or any other matter in connection with the success of the seeds, bulbs or plants sold by us and will not be responsible in any way in cases of failure, other than to replace bulbs untrue to name. All orders are accepted on these conditions only.

IMPORTANT—Be sure to list remittance here

Enclosed Please Find	Draft or check	Money Order	Cash	Postage Stamps	Total Amount
Quantity	DESCRIPTION			Price	
					TOTAL

For Remarks or Additional Space Use Other Side

REMARKS—



L. Szovitsianum



L. Umbellatum

1949

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REMARKS—

NORTH AMERICAN LILY SOCIETY

Membership in the Lily Society is open to any person, who is interested in promoting the culture of lilies. Provision is made for the organization of regional groups within the Society and for the affiliation of garden clubs and other societies interested in lily culture.

Dues in the Society are \$3.00 for annual membership, \$5.00 or more for sustaining membership and \$50.00 for life membership. Inquiries regarding the Society should be sent to Dr. Robert Stewart, Carter's Lane, Riverdale, Maryland.

THE AMERICAN LILY YEARBOOK will be sent to all members of the Society. Price for non-members is \$3.00. The **YEARBOOK** can be ordered through **SANDYLOAM**.

